The Current Issue

The needs for our systems to provide security and privacy have escalated dramatically as a result of what might be called the "internet age". Once data is on-line, it becomes a target for both over-zealous exploitation and malicious purpose. While database systems have had security functionality since their birth, the new requirements of the internet age require much more. This is by no means captured completely by access rights or strong authentication, though these surely provide some help.

There are a number of really hard problems in this area. One security problem is that in a widely dispersed system, security is hostage to the vulnerabilities of the weakest links. This is similarly true for privacy. So "end-to-end" solutions become a requirement. Privacy can be even more subtle than security. The issue here is permitting some useful and hopefully innocuous access while preventing the escape and misuse of private information that might be accessible via determined effort. The current issue pursues these and a number of other very hard problems and gives some insights into how researchers are attacking them.

So this issue is both timely, given our hopes for further exploiting the web as an information resource, and challenging in the difficulties being faced. I want to thank Johannes Gehrke for both suggesting the topic and for editting this special issue of the Bulletin on "Security and Privacy". These problems will be with us for a long while, and are very important to our industry. So surely they represent a great research opportunity for our field. The current issue gives a snapshot of some of the approaches currently being pursued. It makes for very interesting reading (and thinking).